

The world's natural forests are under unprecedented strain in the twenty-first century. Recent global and Pacific reports document the appalling extent of logging in the tropics and its negative effects on communities, ecosystems, and developing economies. For the rural majority in Melanesia, uncontrolled logging has profound consequences for subsistence, traditional culture, health, income, and civil rights. Causes of the tropical forest crisis are multidimensional. These range from inefficient harvesting and processing, misguided forestry policy, and relentless demand for timber, to inadequate regional and global governance. The crux of the problem lies with unsustainable yields, destructive methods, and illegal company practices, facilitated by official corruption.

The United Nations (UN) is attending to deforestation because of its global ramifications for development, climate change, and biodiversity. Non-government organizations have long been sounding the alarm. Bilateral and multilateral donors are incorporating sustainable forestry into aid programs. The Secretariat of the Pacific Community (SPC) is promoting national reform and liaising with global forest agencies. Despite this flurry of activity and the rapid pace of deforestation in Melanesia, forest policy has been a blind spot for the Pacific Islands Forum (PIF). The Forum has devoted high-level policy direction to the management of tuna stocks (von Strokirch

2007), including major pronouncements at its last meeting in Tonga. Forests urgently warrant a comparable spot on the regional agenda, with concerted reforms in this vital but ailing sector.

This review outlines current deforestation rates in the world, Pacific trends, the importance of forestry to regional economies, and the socio-economic and environmental costs of prevailing industry practices. Unsustainable forestry practices are analyzed, including the role of Malaysian companies, the insidious forms taken by illegal logging, associated corruption, and the complicity of consumer nations in the trade. A brief chronology of global institutions, milestones, and debates on forests is followed by a focus on recent developments in 2007. The agenda of global agencies and donors illuminates options for the Pacific to develop a regional forest policy and the external sources of support they can draw on.

The UN Food and Agricultural Organization (FAO) described the gravity of trends: "The world has just under 4 billion hectares of forest, covering 30 percent of the world's land area. From 1990 to 2005, the world lost 3 percent of its forest area, a decrease of some 0.2 percent per year" (FAO 2007, ix). In the period 2000 to 2005, about 13 million hectares of forest cover were cleared each year, or 73,000 football fields per day. Of 1.6 billion trees removed globally each

year, almost 1 billion are not replaced (AGO 2007). It is estimated that only 12 percent of the world's forests are under sustainable management (UNFF 2007, 35).

Forest cover has stabilized or increased in developed countries with temperate climates, mainly in North America and Europe, where environmental awareness is higher, plantations are widespread, and forestry institutions strong. Developing countries with tropical forests experienced a persistent net loss of tree cover. According to the International Tropical Timber Organization (ITTO)—whose members account for 76 percent of tropical timber production and 90 percent of trade—in ITTO producers, forest cover has declined from 52 percent in 1985 to 46 percent in 2005. ITTO member production of tropical logs totaled 137 million cubic meters in 2006 (ITTO 2007, 20, 21).

In Southeast Asia, net forest loss accelerated. Several countries, notably Indonesia, lost total forest cover at rates exceeding 1.5 percent a year. Loss of primary forests (not counting plantations) in Southeast Asia was even more disturbing at 2 percent a year. Oceania, including the Pacific Islands, Australia, and New Zealand, incurred net losses of 0.17 percent a year from 2000 to 2005. After a recovery in the 1990s, Oceania's natural forests have experienced a decline since 2000 (FAO 2007, 16).

Net losses to forest cover in Melanesia are ongoing. Fiji's forest totals about 1 million hectares, with only small remnants of primary forest; most natural forests have been logged or converted to other land use. Deforestation in Fiji during the 1990s

averaged 2,000 hectares, or 0.2 percent per annum. Vanuatu has a forest sector similar in size to Fiji's but did not experience an obvious decline over the last fifteen years. However, several islands far exceeded sustainable yields (Enters 2007, 16–17, 21–22).

The truly alarming trends are in Solomon Islands, Papua New Guinea, and neighboring Papua. With just over the combined forests of Fiji and Vanuatu, from 1990 to 2005 Solomon Islands had an annual deforestation rate of 1.6 percent. Papua New Guinea's forests dwarf those of its Pacific neighbors, with a total cover of 33.9 million hectares. Between 1990 and 2005, PNG deforestation was over 250,000 hectares per annum or 0.5 percent (Enters 2007, 25, 29). In absolute terms Papua New Guinea's net losses of primary forest are unsustainable, both for the nation and in terms of global environment considerations.

Papua and Papua New Guinea host the third largest rain forest in the world, after the Amazon and the Congo. The province of Papua accounts for 41.5 million hectares or 23 percent of Indonesia's national total. Of this, 27.6 million hectares of Papuan forest are classified for "production," with nearly half that already allocated to logging companies (CFR 2003, 53). Solomon Islands and Indonesia share the dubious distinction of having the highest deforestation rates in the world.

Global deforestation is worse than it appears, given that the positive trend in some temperate countries is partly due to plantations, which cannot compensate for the loss of natural forests and biodiversity. Temperate regions have also been increasing

imports of tropical timber. Since the early 1990s the United States has gone from being a major net exporter to being a major net importer of forest products (FAO 2007, ix). Statistics for deforestation in tropical countries understate the real loss and damage because they do not take into account degradation, which can be severe and irreversible. Tropical forests are also being converted to plantations.

The inexorable global trend is one of unsustainable logging of primary forests, particularly in the tropics. Like fish stocks, trees are supposedly a renewable resource. However, the failure to sustainably manage natural forests, or to even replace them with plantations, will soon produce a yawning gap between global demand and diminishing supply. The economic impact of a terminal failing forestry industry would be extreme, as the sector accounts for about 1.2 percent of global gross domestic product (FAO 2007, 20). Forestry employs some 13 million people and generates products worth US\$350 billion. A further 1.6 billion people depend on forests for food and fuel (AGO 2007). Many developing countries are dependent on wood exports.

Oceania, including Australia and New Zealand, earned US\$5 billion from forestry in 2000 (FAO 2007, 20). In Fiji, for the five years since 2002, the forestry sector has generated F\$45 million per annum, accounted for 3 percent of the gross domestic product, and provided 4,500 jobs (ITTO–Fiji 2007, 2). Fiji's total industrial wood production in 2004 was 435,000 cubic meters. In Vanuatu, total industrial wood production in 2005 was 7,270 cubic meters, and forestry

contributed about 7.7 percent of gross domestic product in 2000 (Enters 2007, 23). In 2005, the log harvest in Solomon Islands was 1.1 million cubic meters and the sector employed one in six people (Enters 2007, 27). Logging contributes 70 percent of export earnings, makes up 18 percent of Honiara's government revenue, and drove the 10 percent economic growth the Solomons experienced in 2007 (Wasuka 2008). In Papua New Guinea, forestry averaged 4.0 percent of gross domestic product since 1999 and employs about 9,000 people, or 4 percent of formal employment. In 2005 foreign exchange earnings from forestry were US\$173 million, making it the second biggest export earner (ITTO 2007, 3). The log export tax contributes 4 percent of total tax revenue, while the industry provides 16 percent of indirect taxes (ODI 2007, 2–3). From 1995 to 2000 Papua's forestry contributed US\$100 million a year to Jakarta's coffers. Due to decentralization, 80 percent of forestry royalties were to remain with the Papuan province from January 2002 (CFR 2003, 54–57).

The timber industry is heading onto a more sustainable path in Fiji and Vanuatu. Yet the sheer volume of logging is unsustainable in Solomon Islands. In 2005 log volume was four times the sustainable yield. The natural forest will be exhausted by 2010, when the International Monetary Fund predicts economic growth will plummet to 1.5 percent and the government will face a crippling budget deficit (Wasuka 2008). Net losses of forests are also continuing in Papua New Guinea and Papua; it will simply take longer to exhaust their massive

resource and replicate the Solomon Islands pattern of boom to bust.

Even while the logging boom lasts, governments, communities, and landowners are missing out on significant income. The World Bank estimates that producer countries lose a combined total of US\$10 to 15 billion a year due to poor governance in the timber sector (ODI 2007, 31). Illegal logging costs Indonesia alone up to US\$4 billion a year (EIA and Telapak 2007, 3). A substantial share of that stolen revenue should have gone to Papua. In Papua New Guinea the annual loss solely from companies understating the value of export timber is at least US\$50 million (ODI 2007, 31).

Proponents of large-scale logging point to benefits to local inhabitants in logging royalties, harvesting and processing jobs, and infrastructure built by companies such as roads, bridges, clinics, and schools. In a costly public relations exercise, Rimbunan Hijau, the biggest logging company in Papua New Guinea (Malaysian in origin), hired ITS Global to produce three reports detailing its input to communities and the national economy (ITS Global 2006a, 2006b, 2007). ITS Global's figures indicate that the lion's share of infrastructure expenditure goes to logging roads that only incidentally serve the community (ITS Global 2007, annex 1).

Critics, mainly nongovernment organizations, claim that company roads and bridges are often poorly constructed and do not last long after the project ends. Exploiting a loophole in Papua New Guinea's system of "timber authorities," companies also use road construction as a pretext to

log forests. In the so-called Kiunga-Aiambak Road Project in Papua New Guinea, the company cleared 600,000 cubic meters of logs from 1995 to 2002 with no functional road in evidence at the end of it (Greenpeace 2002, 2).

The cash income earned by landowners and local loggers is relatively small and short term, ending once an area is logged out. Occupational health and safety standards for timber workers are also lax throughout Melanesia. In Rimbunan Hijau's veneer mill in Papua New Guinea, workers have more security of income but are subject to low wages and poor working and living conditions (ACF and CELCOR 2006, 18).

For women and children there are many costs stemming from large-scale logging. Male relatives often squander royalties on alcohol, tobacco, guns, and gambling. Sexual abuse and prostitution linked to transient company personnel also spread sexually transmitted diseases, including HIV infection (ACF and CELCOR 2006, 19). Papua province and Papua New Guinea have the highest HIV/AIDS rates in the region. In a shocking study on illegal logging in Solomon Islands, it was linked to widespread commercial sexual exploitation of children. The cases included prostitution and sexual abuse, child brides, pornography, and underage pregnancies (ACM 2007, 5–6).

Damage to forests directly affects the livelihoods of the rural majority. Sediment from logging pollutes watercourses, as do chemicals used for treating logs. Loss of habitat impedes hunting and gathering. In Papua New Guinea, loss of sago palms and the

departure of fish, crayfish, wild pig, tree kangaroos, cassowaries, and other birdlife from logged areas have a severe impact on human nutrition (ACF and CELCOR 2006, 4). In Solomon Islands, logging is linked to fish kills and contamination of water for many years after operations cease (WWF 2005, 18).

Large-scale logging projects bring a high potential for conflict due to their short duration, environmental impact, and inadequate or inequitable distribution of cash, jobs, and services. There are disputes over land rights as traditional owners compete for log royalties. Conflict can also occur as forest dwellers oppose logging companies in league with government. In Papua New Guinea and Papua, police or military forces (or both) have engaged in detention of and brutality against landowners who have protested or legally challenged logging projects. Gun trafficking occurs in logging camps in the Southern Highlands, while guns have been smuggled into West New Britain via logging ships (ACF and CELCOR 2006, 24). Resource conflict, corruption, guns, and remote locations ensure that the risk of human rights abuse is high.

Conflicts over resources are not limited to the local level. While the focus for the ten-year Bougainville conflict was a mine, the similarities in grievances suggest there is scope for large-scale conflicts over forests with repercussions for national and regional security. In Solomon Islands the unsustainable, inequitable, and corrupt process of timber extraction overseen by politicians was a major factor in the weak state and decline in law and order that precipitated the

intervention of the Regional Assistance Mission to Solomon Islands (RAMSI). The mahogany industry in Fiji is lucrative for the individuals involved, and a pending court case for alleged corruption by George Speight in this domain was a factor in his 2000 coup.

In Papua New Guinea, Solomon Islands, and Papua, violent disputes are set to worsen as the resource base shrinks, leaving less to fight over while the state weakens and services decline due to unsustainable development coupled with high population growth. The proliferation of small arms exacerbates conflicts (von Strokirch 2005, 421–426). In Solomon Islands an economic crisis due to natural forests being exhausted could precipitate another upheaval. Vast natural resources in Papua provide a key motivation for Indonesia and its armed forces to retain this province, which could see ethnic conflict and human rights abuses persist indefinitely.

Unsustainable forestry affects other issues of global significance such as climate change. Carbon released by deforestation, mainly from tropical countries, contributes about 20 percent to global greenhouse gas emissions, or 6 billion tonnes of carbon dioxide per annum, which is more than emissions from the transport sector (AGO 2007). In a vicious cycle, forests are being adversely affected by climate change due to increased damage from cyclones, drought, fire, pests, and disease.

On the basis of current trends, the Amazon rain forest could dry out by the end of this century as a result of a 2 degrees Celsius increase in global temperature. The forests of Melanesia (dubbed the “Paradise Forests”

by Greenpeace International) could be similarly affected. Retaining rain forest is by far the cheapest way to cut emissions and mitigate climate change (Stern 2006, vii–xiii). Besides preventing emissions by avoiding deforestation, the world's forests act as a sink for carbon dioxide if they are left standing. The Pacific Islands are most at risk from climate change and have most to gain from avoiding deforestation.

Paradoxically, tropical forests are being cleared partly for so-called environmentally friendly renewable biofuels such as palm oil. Green rhetoric aside, a more pressing strategic motivation for the shift to biofuels is the imminent peak in global oil supply, after which demand will outstrip supply. An increase in oil and gas prices will place more pressure on wood as a fuel source. The recourse to agricultural land for biofuel production is also contributing to a global food shortage and widespread famine. Clearing land to plant oil palm has been a driver of deforestation in Papua New Guinea, Solomon Islands, and Indonesia.

Another concern about deforestation is the threat to biodiversity. In 2004 the World Conservation Union estimated that 23 percent of the world's mammals, 12 percent of birds, 61 percent of reptiles, and 31 percent of amphibians were at risk of extinction (Greenpeace 2006, 1). Worldwide, more than 16,000 species are threatened with extinction while "the great majority of well-studied species are declining in distribution, abundance or both" (UNEP 2007, 4). Many threatened species depend on forests for survival. Two-thirds of all

species inhabit forests, and deforestation in the tropics accounts for the loss of up to one hundred species a day (AGO 2007).

Biodiversity is richest in the tropics where deforestation is proceeding apace. Due to small, isolated habitats and limited populations, endemic island species are especially at risk. Threats include invasive species, degradation caused by humans, natural disasters, and climate change. Half of the 724 animal extinctions in the past four centuries were from islands (CBD 2008). Papua New Guinea accounts for 7 percent of the world's species of flora and fauna, and Solomon Islands has the highest concentration of endemic birds on earth (EU Commission 2006, 15). Papua, Papua New Guinea, and Solomon Islands are in the Bismarck Solomon Sea, which has the highest diversity of saltwater fish and coral species in the world; uncontrolled logging is polluting this sea. Solomon Islands hosts one of the ten most threatened forest ecoregions in the world, including twenty-five threatened tree species (WWF 2005, 9, 11, 15).

Universally, ecosystems are being degraded because biodiversity is not high on the political agenda. Yet biodiversity is not just a concern for environmentalists. Ecosystems fulfill important economic, social, and cultural functions. Natural resources provide more than a quarter of the wealth of low-income countries. In agriculture, biodiversity is vital to soil formation, nutrient cycling, and pollination (UNEP 2007, 6, 12–13). Aesthetic aspects of biodiversity contribute to quality of life and act as a major attraction for tourism. The

wild fish catch is a multibillion-dollar industry. Pacific Islanders depend on these benefits from biodiversity.

In short, deforestation in the tropics, including the Pacific, is contributing significantly to climate change and shrinking biodiversity, with the latter also exacerbated by global warming. A major concern of scientists with regard to global warming and the rapid loss of species is that these two trends are reaching tipping points, beyond which there will be abrupt, accelerating, and irreversible changes. Once these tipping points are passed, even if environmental degradation stops, the adverse effects will continue well into the future (UNEP 2007, 22).

The primary cause of decreasing forest cover is excessive harvesting of natural forests. Poor management exacerbates unsustainable yields. Unsustainable practices are used to log tropical forests. Clear felling is akin to a holocaust, causing irreversible damage to the ecosystem. It is a cost-saving means of harvesting the maximum yield in the shortest time. Land clearing can also serve other agendas such as tree plantations and agriculture, including biofuel crops. A failure to leave viable stands or to reforest contributes to net losses of forests and an unsustainable industry.

Causing somewhat less damage is the careless felling of select trees, so that for each tree deliberately felled many more are damaged or killed. Excessive opening of the canopy dries out the rain forest, making regrowth difficult. Poorly built roads and drainage systems, and failure by loggers to respect buffer zones next to watercourses also damage the environment. Systematic harvesting of rare old-

growth trees quickly drives them to extinction.

A report to the Secretariat of the Pacific Community indicates that all the above practices are evident in Fiji, Vanuatu, Papua New Guinea, and Solomon Islands. A telling sign that sustainable forestry is not being implemented in Melanesia is pervasive use of the traditional “butterfly cut.” This nondirectional felling is uneconomical, causing waste, breakages, and complicating removal. Losses can be as high as forty-five trees lost for each one harvested (Enters 2007, 11, 34).

The greatest incidence of waste has been linked to industrial companies, with nongovernment organizations identifying Rimbunan Hijau as the prime culprit. In some of its concessions in Papua New Guinea, “collateral damage” of up to one hundred trees per hectare has occurred. This is virtually clear felling. Involvement by Rimbunan Hijau and other Asian companies has seen some islands in Vanuatu logged out, and Solomon Islands logged at an unsustainable rate for decades (Greenpeace 2004, 9, 16).

Loggers often use unsustainable methods because of ignorance; even legally authorized operations can be poorly managed. Within illegal operations unsustainable practices seem to be ubiquitous. Large-scale illegal operators are bent on making quick profits, the bulk of which often ends up overseas. They thus have scant regard for the environment, local community, national economy, or future generations that the forest sustains.

Illegal logging refers to when “wood is harvested, transported, processed, bought or sold in violation of national laws” (DAFF 2007, 3).

Illegal operators gain access to forests via corruption, log protected species or areas, log after permits expire, and misreport the amount, type, and value of logs taken or exported to avoid taxes or penalties. Stakeholders from government and industry in Indonesia and Papua New Guinea conceded that “noncompliance” with forestry laws is problematic and widespread among landowners, loggers, companies, and governments (ITTO 2007, 22). A host country’s politicians and officials can allow illegal timber practices in return for favoritism, bribes, and kickbacks. At lower levels, officials turn a blind eye to all kinds of infringements, from unsustainable techniques to labor law abuses or misreporting of cargo (Rosenbaum 2005).

Prospects for reform are fraught when the forces of law and order are implicated in corruption. Often, not only owners and managers of logging companies but also high-ranking politicians and civil servants are beyond the reach of the law. In the Solomon Islands, as prime minister for the best part of a decade, Solomon Mamaloni was directly involved in unsustainable logging, both as a timber company director and as the overseer of lax forestry policies and an associated culture of corruption, in which he allegedly participated (Frazer 1997). Following his lead, politicians at all levels took bribes and favors from logging companies. Vested political interests may help to explain the generous tax concessions bestowed on the industry and the failure to reform forestry policy and legislation. The industry carried on its rapacious business as usual after the regional intervention in 2003, despite RAMSI’s mission to

promote good governance and sustainable development, and Australia’s expenditure of A\$1 billion to that end. The new prime minister, Derek Sikua, has promised reform, but some of his ministers are tainted with corruption or hold financial interests in logging (Skehan 2008).

Between 2000 and 2005 Papua New Guinea commissioned five independent reviews of the troubled forestry industry. Due to apathy or complicity at the highest levels, the majority of recommendations were ignored. One review described logging companies as “robber barons” encouraged by persons whose proper role was to exercise control (Forest Trends 2006, 5). Little has changed since the damning conclusions citing “robber barons” in Justice Barnett’s 1988 enquiry. Ministers are still coming under fire from the ombudsman and forestry reviews for acting on behalf of companies (Greenpeace 2004, 6–7). In 2006, Prime Minister Sir Michael Somare ordered the forest minister to expedite a permit for a logging company (ACF and CELCOR 2006, 23).

Forestry corruption is extreme in Papua. President Susilo Bambang Yudhoyono launched an unprecedented operation against illegal logging in Papua in March 2005. It involved 1,500 personnel with a budget of US\$1.3 million. They seized 400,000 cubic meters of stolen logs (equivalent to 3 percent of global annual trade) and rounded up over a hundred suspects. Yet no senior military or police were arrested, despite the collusion of many in the trade. By January 2007, only thirteen convictions had been secured; none were of major operators or financiers (EIA and

Telapak 2007, 10–11). The untouchability of “timber barons” pillaging Papua’s forests is attributed to powerful connections in Jakarta and to bribery of police, prosecutors, and judges (EIA and Telapak 2007).

Failure to put the forestry industry on a sustainable and legal footing also relates to broader governance issues, including lack of resources and capacity in regulatory agencies. Throughout Melanesia, inadequately trained, staffed, and financed forestry departments are demoralized and ill equipped to even monitor, much less promote or enforce, sustainable forestry. They are also in a conflict of interest, having to report on operators on whom they rely for transport to, and accommodation in, remote concessions (Enters 2007). Similar resource problems exist in customs.

Notwithstanding the frontline responsibility of governments in the Pacific for enforcing compliance, foreign companies and their countries of origin are also culpable for misdeeds. Companies are predominantly Malaysian (though Chinese, Korean, and Australian companies also operate in Solomon Islands). Foreign companies are party to, and often instigate, corruption. They glean the lion’s share of profits from logs, particularly if they have understated the value or smuggled it outright.

Logging companies are egged on by demand from processing nations. The main markets for logs are Malaysia, China, and Vietnam, as they process them into secondary wood products. They have virtually exhausted their own natural forests, they must cater to fast-growing populations, and their economies rely on manufacturing

exports, including wood products, for developed countries. Most Pacific timber is destined for China.

China is the largest customer for tropical timber, importing five of every ten trees traded. In the last decade China’s importation of wood products increased more than fourfold. It purchases 29 percent of Indonesia’s wood products and 84 percent of Papua New Guinea’s logs. The sheer volume of China’s imports is problematic for sustainable yield in tropical forests. China is also allegedly a major buyer of illegal timber. Discrepancies in trade data indicate that 58 percent of China’s imports from Malaysia are of unidentified origin and probably came from Indonesia in violation of Jakarta’s 2001 ban on log exports (Greenpeace 2006, 1–2). High-value Merbau logs are procured illegally in Papua by Malaysian companies, sent across the border to Papua New Guinea, then exported with fake documentation, usually to China (ACF and CELCOR 2006, 26).

China deserves credit for increasing its forest cover via plantations. However, with no apparent concern for the origin, legality, or sustainability of log imports, it has played a key role in the illegal timber trade. It processes logs into products such as plywood, veneer, furniture, and paper that are then exported. This is very similar to the way China operates in the global fish market, wherein most of its catch is obtained in distant fishing grounds such as the Western and Central Pacific Ocean, processed in China, then reexported to developed countries (von Strokirch 2007).

Malaysia logs the most timber in the Pacific, China processes the bulk

of it, and Singapore acts as a financial haven for the “robber barons” who run the trade (EIA and Telapak 2007, 22). Despite being one step removed from these unsavory activities, developed nations—principally the European Union (EU), United States, and Japan—are also responsible for deforestation and illegal logging. Their appetite for wood products is increasing because they are conserving their own forests and because per capita consumption is climbing with affluence.

China’s exports of secondary processed wood products (SPWP) grew 20 percent from 2004 to 2005. China was the largest national SPWP exporter at US\$11.4 billion in value in 2005, surpassed only by the European Union, which collectively exported US\$25.8 billion. The United States is the main market driving SPWP trade, as its consumption grew 52 percent in the five years to 2005 (ITTC 2007, 23). During the last decade US and EU imports of Chinese SPWP increased in value by more than 8 times and 5 times, respectively. As with demand for fish, the developed world’s per capita consumption of wood is much higher than that of developing countries. Chinese citizens consume 36 kg of paper per annum, compared to 301 kg per American (Greenpeace 2006, 2).

The problem lies not only with excessive consumption by developed countries but also with their complicity in illegal trade. From 2005 to 2006, countries in the European Union imported US\$70 million worth of sawn timber from Indonesia, even though export of sawn timber had been banned by Jakarta since 2004

to slow deforestation and add value to exports. Trade in the rare Merbau wood is another case in point. Merbau logs smuggled from Papua in 2004 were worth only US\$120 per cubic meter when loaded onto vessels; the value doubled to \$240 in China, and, after processing, they were sold in Europe or the United States for \$2,000 (EIA and Telapak 2007, 18). Even in the legal trade, producers like Papua New Guinea and Solomon Islands that sell logs are paid only a small fraction of what the resource is worth.

Negative trends in deforestation, unsustainable and illegal logging, and exponential growth in trade and consumption of tropical timber have meant that this issue requires international cooperation to manage it. Concern about depletion of natural resources dates back to the 1980s. Deforestation was addressed by the United Nations at the Rio Earth Summit in 1992. The result was the Rio Forest Principles to guide sustainable forest management, and Agenda 21, an action plan with an entire chapter on “Combating Deforestation.” Most Pacific Island countries are signatories to Agenda 21.

In 1994 the United Nations concluded the International Tropical Timber Agreement (ITTA) to govern the International Tropical Timber Organization (ITTO, established 1986). The ITTA and ITTO do not impose obligations but facilitate international cooperation on the tropical timber trade and sustainable forestry (ITTC 2007, 1). Fiji, Papua New Guinea, Vanuatu, and Indonesia are ITTO members; Solomon Islands is not. All the main aid donors to the Pacific are ITTO consumers. In Janu-

ary 2006, the United Nations concluded a new ITTA to replace the 1994 agreement, but it has not yet entered into force. The ITTO's work involves conferences, diagnostic missions to producers, guidelines, and research and publications on all issues in this sector (ITTC 2007). The Pacific Island country members are drawing on these resources.

In the year 2000, the UN Forum on Forests (UNFF) was mandated as a permanent intergovernmental body. Its first session (UNFF1), held in 2001, included Pacific Island countries. The International Arrangement on Forests (IAF) was also agreed to in 2000 to implement sustainable forestry actions. The IAF is supported by the UNFF and the Collaborative Partnership on Forests, a forum for leaders of UN agencies with direct or crosscutting interests to forests (LRD 2006).

The UNFF agreed on four landmark "global objectives on forests" in 2006: (1) to reverse the loss of forest cover worldwide through sustainable forest management; (2) to enhance forest-based economic, social, and environmental benefits including those for forest-dependent people; (3) to significantly increase the area of protected forests worldwide; and (4) to reverse the decline in official development assistance for sustainable forest management. The goal is for these objectives to be achieved by 2015 (UNGA 2007, 5).

There will be a specific theme for the next four UNFF sessions—2009: forests in a changing environment; 2011: forests for people and poverty eradication; 2013: forests and economic development; and a review of progress in 2015. Every forum will

address implementation (finance, technology, capacity, and awareness); law enforcement; and governance. Within the 2009 theme the focus is on sustainable forest management, climate change, deforestation, and biodiversity (UNFF 2007); this will be of significant interest for the Pacific.

In 2007 the UNFF decided to engage more with regional bodies to bring policy closer to those who implement it. This will raise regional awareness of the UNFF, enable regions to convey their perspectives to the UNFF, and promote inclusion of UNFF policies in regional agendas. Regions are keen for the UNFF to fund sustainable forestry initiatives. Regional organizations are encouraged to submit progress reports every two years, given that most countries fail to do so. Regional organizations are to lead activities for the International Year of Forests in 2009 (RLI 2008).

The UNFF7 agreed on a "non-legally binding instrument on all types of forests" with the priority of strengthening high-level political commitment to sustainable forest management; all other objectives depend on this. The UN General Assembly adopted the resolution in December 2007 (UNGA 2008). This new "instrument" falls short of being a full-fledged treaty with obligations that can be enforced. It is easier to achieve consensus on less-demanding, voluntary agreements. Nevertheless, they do elevate issues on the global agenda, identify goals and methods, and act as precursors to later agreements that have teeth. They also apply normative pressure for compliance.

The Convention on Biological Diversity (CBD) has a direct bearing

on forests and its obligations are binding, unlike those of the UNFF instrument. CBD parties are to implement measures to conserve biodiversity, including sustainable development, rehabilitation of degraded ecosystems, protection of threatened species, and establishment of protected areas (CBD 1992). Parties are also bound to report on their progress every four years. The CBD has achieved universal membership among the Pacific Island Forum members and French territories. In the Pacific, the United States alone has not joined. By contrast, only five Pacific Island countries have joined the Convention on International Trade in Endangered Species. Listing endangered species therein could afford them protection and also help guard trees against trade in illegal timber.

Pacific enthusiasm for the CBD is not surprising. Islanders depend on biodiversity more than most and much of their biodiversity is under threat. Another attraction is that Article 20 specifies developed countries are to assist developing countries meet the cost of fulfilling their obligations. The CBD also pays particular attention to small island developing states. In 2006, the CBD Conference of Parties adopted a new program of work dedicated to islands (IBPoW 2006). It aims to significantly reduce the rate of island biodiversity loss by 2010. Islands are viewed as cost-effective test cases for conservation strategies. The Island Biodiversity Programme of Work urges donors to support conservation in small island developing states. The CBD secretariat assists island members with finding partners for projects, disseminating informa-

tion and capacity building (IBPoW 2006).

In tandem with the Island Biodiversity program, the Global Island Partnership was launched in 2006 as an informal network to advance island conservation. Beyond sharing information, once again a major preoccupation is how to access funds from public and private donors, notably the Global Environment Facility (GEF). The Global Island Partnership helped to inspire bold initiatives among members in 2006, including commitments by Fiji and Micronesian countries and territories “to conserve 20 percent or more of their terrestrial and/or marine resources by 2020” (CBD 2008).

A multilateral environment agreement of great relevance to forests is the UN Framework Convention for Climate Change (UNFCCC) and its 1997 Kyoto Protocol. All Forum countries are members. The Kyoto Protocol requires developed countries to reduce net greenhouse gas emissions by 2012. It allows them to include afforestation, reforestation, and deforestation since 1990 in calculating commitments. Trade in carbon emission rights can also be counted. The Clean Development Mechanism (CDM) gives credit to developed countries for afforestation and reforestation in developing countries, but no credit for preventing deforestation. The mechanism is promising but complex and only one project has been approved to date. Pacific Islands countries’ heads of forestry are attending an SPC workshop in January 2008 to learn ways of tapping into CDM forestry funding (LRD 2008).

The exclusion of avoided deforestation from the Clean Development

Mechanism was puzzling, given that it is the most timely, cost-effective way to mitigate climate change. In response, in 2005 Papua New Guinea launched the Coalition for Rainforest Nations to lobby the international community to take responsibility for carbon sequestration (the process through which carbon dioxide from the atmosphere is absorbed by plants through photosynthesis and stored as carbon in biomass and soils) and watershed protection that rain forests provide. As a conservation incentive, the coalition proposed that nations achieving permanent reductions in deforestation be given financial compensation. Continuing the theme in 2007, an alliance was formed of the “Forestry Eight” countries that account for 80 percent of tropical forests, including Papua New Guinea and Indonesia (Mongabay 2007a). Sir Nicolas Stern also advocated compensation for forest protection including foregone income, administration, and enforcement. Compensating the eight countries responsible for 70 percent of emissions from land use was estimated to cost about US\$5 billion per annum (Stern 2006, xxvi).

The UNFCCC meeting in Bali in December 2007 put Reducing Emissions from Deforestation and Degradation (REDD) on the agenda for a treaty to govern emissions reductions from 2012. Yet REDD received a setback as the European Union excluded the concept from its emissions trading scheme—the world’s largest—until 2020. It was feared REDD would undermine efforts to reduce emissions in developed countries if companies simply paid to export the burden. However, REDD credits have begun

in voluntary carbon markets with the first deal covering forest conservation in Aceh (Mongabay 2008). To move along the REDD concept, in 2007 the World Bank set up a UN Forest Carbon Partnership Facility providing US\$300 million to fund emissions reductions via forest conservation (Mongabay 2007b).

The Global Environment Facility is another major source of funding for projects on climate change adaptation, land degradation, and biodiversity protection. Since 1991, fourteen Pacific Islands countries have received US\$84 million, out of US\$6.2 billion GEF funds disbursed worldwide. To enable Pacific Island countries to access proportionately more funds, in 2007 the Global Environment Facility established a Pacific Alliance for Sustainability, to be allocated US\$100 million under the fourth GEF round. The Secretariat of the Pacific Regional Environment Programme held a regional workshop on the Global Environment Facility in September 2007 and appointed a GEF support adviser based in Apia (Takesy 2007).

Surprisingly, given their value to rural societies, their function as a carbon sink, and potential global funding to protect them, forests have been neglected by Pacific regionalism. They are certainly the poor cousin of fisheries in attention, agreements, policies, and resources devoted to the issue. For forests there is no comparable peak organization such as the well-resourced and influential Forum Fisheries Agency. There is also no dedicated intergovernmental regional management organization for forests as there is for fisheries with the Western and Central Pacific Fisheries

Organization managing regional tuna stocks.

There are reasons for the differential treatment. Forests do not seem relevant to many small Island states. For most Polynesian and Micronesian states, fishing fees are the main source of foreign income apart from aid and tourism. Moreover, diminutive atoll nations find strength in numbers dealing with external powers. Another difference is that tuna are migratory, necessitating an international approach to the high seas, as well as external assistance to police Exclusive Economic Zones. Regional negotiations on forests also do not occur because larger states are resistant to external scrutiny, in part due to corruption being rife in this lucrative domain.

However, atoll nations should be greatly concerned about deforestation in their neighbors because of the implications for global warming and rising sea levels. Also, given the extent of illegal logging, remote forests clearly are subject to abuses by foreign companies in a way similar to illegal, unregulated, and unreported fishing. Underreporting value and transshipment at sea are common to illegal trade in both resources. Forests thus warrant regional cooperation to prevent these nefarious practices. Official corruption is evident in fisheries; that corruption is worse in forestry is an argument for more rather than less international involvement.

The neglect of forests is remarkable in the Pacific Islands Forum, the region's preeminent political organization. The situation was different in the 1990s. Then global interest and support from donors helped put forestry

on the agenda. In 1995 the Forum adopted a regional code of conduct for logging as a guide to developing national codes by the forested states. A regional review of national codes in 1999 noted areas for improvement, but overall gave a positive report. But since then, forestry management has deteriorated region-wide (Enters 2007, 7). With hindsight, the 1999 review was unduly optimistic and has apparently contributed to regional complacency.

The Pacific Plan for strengthening regionalism set goals for sustainable development, economic growth, good governance, and security. How forests are managed impacts on all four. "Improved natural resource and environmental management" is an objective within the goal of sustainable development. Yet, under regional priorities for immediate implementation, virtually every major sector was listed *except* forestry. In the sole reference to forests, "no decrease" in "native forests" was cited as an "indicator" for sustainable development, but without specific measures to promote it (Pacific Plan 2005, parts IV and VI). To be sure, regional initiatives cannot be launched on all fronts simultaneously. However, the speed at which forests are disappearing requires that they be addressed explicitly as a matter of urgency.

In 2007 the Forum updated the Pacific Plan. Climate change and energy security were identified as priorities for National Sustainable Development Strategies (NSDS) in 2008. Despite their role in mitigating carbon emissions, forests were not addressed under climate change. The SPC is to develop an "agriculture

and forestry initiative” for consideration in 2008, while the SPC and PIF Secretariat are to jointly develop “NSDS-based agriculture and forestry policies, plans of action and budgeting processes.” What these would entail was not explained (PIF 2007, annex A). The lack of detail on forests was in stark contrast to extensive prescriptions on fisheries in both the Pacific Plan update and a declaration entitled “Our Fish, Our Future” (PIF 2007, annex B). Apart from the above annex, the Forum’s silence on forests has been deafening, with no mention in annual communiqués from 2000 onward.

In view of the Forum’s lack of attention, it was left to the Ministers of Agriculture and Forestry to govern the politics of regional forestry in the Pacific. However, the ministers only meet every four years, though their heads of department meet biennially. By default, the main locus for regional action appears to be the Secretariat of the Pacific Community, whose apolitical mission is technical assistance, training, and research. The SPC’s Forestry Programme in the Land Resources Division is based in Suva. It consists of two sections: the Forest and Trees Programme funded by AusAID, and the Pacific German Regional Forestry Project.

In partnership with Pacific Island countries, the SPC aims to enhance understanding of the role of forests and strengthen policy, notably national forest legislation. The SPC organized a regional awareness-raising tour on sustainable forest management in 2005 for six Pacific Island countries, held in Fiji (Fung 2005). It also launched the Pacific Agricultural and

Forestry Network in 2006, the goals of which are global marketing and sustainable management. Forest policy workshops for regional countries have been hosted by the Asia Pacific Forestry Commission, Germany, and the International Tropical Timber Organization, but mostly by the Secretariat of the Pacific Community (Bulai 2007a). The SPC also coordinates regional research on logging and processing.

The SPC is the regional focal point for the UNFF and attended its sessions in 2006 and 2007. Pacific Island countries are keen to seek UNFF assistance. To this end, SPC has provided training on international forest policy, and a UNFF official will meet Pacific forestry ministers in 2008. The SPC will hold a regional workshop in 2008 to prepare for UNFF8 in 2009. In addition, the SPC represents the Pacific Island countries and territories at the ITTC, the UNFCCC, and the ASEAN Senior Forestry Officials Seminar (Bulai 2007a). This is regionalism at its best, as it is unrealistic for microstates to send their own representatives. The SPC’s mandate for and actions on forestry are good, but forests need a higher political profile to advance national and regional reforms.

There are polar-opposite views concerning what should be done about the logging industry. At one end of the spectrum are landowners, Malaysian companies, and their cronies in national office who seek to continue business as usual. At the other end are also landowners, international environment organizations, and a consumer lobby in developed countries who believe that industrial logging of tropical forests must end. The “logger baron” view is unsustainable, eco-

nomically and environmentally, while the “green” perspective is politically unrealistic in the short term. A middle path, advocated by UN agencies, donors, and experts in the field, would render the timber industry more sustainable.

The 2007 regional review of logging advocated a series of reforms for Pacific Island countries. Harvesting techniques that minimize waste represent a win for environment and commerce. Measures directed at an environmental outcome are harder to sell. However, communities dependent on forests for subsistence can (and do) play advocacy and watchdog roles. Education is needed for all stakeholders, notably on the national Codes of Logging Practice, and training for practitioners. Forestry departments need more personnel, training, and transport to effectively promote, monitor, and enforce compliance. Habitual breaches must be penalized (Enters 2007). Fiji developed a new forest policy in 2007 based on integrated resource management, which could serve as a model for the region.

Viable stands of natural forest are key to a healthy ecosystem. While improved forestry limits damage, it cannot bring logging yields to sustainable levels. For forest cover to stabilize and industry to have a future would require a complete shift to plantations. There are success stories that can be emulated. Papua New Guinea has two companies with a record for sustainable forestry, Open Bay Timbers and PNG Forest Products. Both have operated plantations over forty years, provide secure employment, and have partial state ownership, while one is the only non-Malaysian operation in

the sector (Forest Trends 2006, 4). Fiji provides a model for plantation mahogany, exports of which were estimated at F\$30 million in 2006 (ITTO–Fiji 2007, 2). States need to consider high-value hardwood plantations in areas that are unlikely to regenerate. Plantations require significant long-term investment. Countries could seek assistance from the Clean Development Mechanism.

More income is gained if value is added by processing logs into secondary products. This can earn the same income from a smaller harvest. Fiji increased its timber export value manyfold by processing pine wood chips and sawn mahogany. Solomon Islands and Papua New Guinea rely heavily on log exports, but this is an enclave economy with low returns. One policy that encourages processing ventures is to ban log exports, as done by Vanuatu in 1993 and Indonesia in 2001. Papua New Guinea bans the export of logs in seven high-value species, while the provinces of Milne Bay and Bougainville have banned all log exports (ODI 2007, 14, 31). Bans form part of a suite of measures to promote sustainable forestry and downstream processing. Customs and coast guards must enforce log bans, though, or the ban is circumvented, as in Papua.

Waste could be reduced in processing. The basic product is sawn wood. In Fiji, Papua New Guinea, and Vanuatu, saw milling is inefficient, with low labor productivity and underutilization of capacity (Bulai 2007b). The level of waste is normal compared to the international average, but the bar could be raised. Fiji has an average recovery rate of 50 percent (ITTO–Fiji 2007), while for mobile

mills in Vanuatu it can be as low as 31 percent (ITTO–Vanuatu 2007). Waste due to poor operator skills could be addressed with training and security of income. Obsolete equipment needs upgrading. However, investment in personnel and machines requires a degree of certainty about log supply that currently does not exist. Erratic supply also deters investment in manufacturing. Plantations could overcome this obstacle. Moreover, old coconut palms that are currently burnt could be harvested and processed (ITTO–Vanuatu 2007, 9).

Greenpeace, the World Wide Fund for Nature (WWF), and the European Union promote ecoforestry as an alternative to large-scale logging. They have set up community enterprises in the Pacific, which incur far less damage to the forest. Yet there is skepticism over the financial viability of ecoforestry. The favored walkabout (portable) mills are barely viable without taking transport, marketing, and certification into account. Ecoforestry in Papua New Guinea survives only with subsidies, and even then provides less income than the interest earned from investing logging royalties in trust funds. The combined financial return from areas that are logged then converted to oil palm is 8.5 times that of ecoforestry (ODI 2007, 20–22). Ecoforestry may be more economic if non-wood products and tourism are factored into the equation. Yet ecoforestry appears unsuited to export unless timber prices increase, which they might do as forests near exhaustion, and certification becomes mandatory.

To earn higher returns and compete in the global market, timber must also meet rigorous standards relating

to physical qualities, phytosanitary regulations to prevent the spread of pests and disease, and—still in its infancy—“chain of custody” certification to demonstrate the legality and sustainability of production from the stump to the shop (ODI 2007, iii). The International Tropical Timber Organization hosted a conference in Papua New Guinea in 2006 on illegal logging in response to the trend in developed countries to boycott uncertified tropical timber. Papua New Guinea has been a target of such boycotts. Certification is strongly advocated by environmental organizations. Not only must Pacific countries engage in sustainable forestry for the industry to survive, increasingly they will have to prove it to consumers.

Governments have a potentially huge role in promoting sustainable yield and harvesting, efficient milling, downstream processing, and an expansion of plantations. There are many tools at their disposal. Tax incentives can be created for investors in plantations, mills, and manufacturing. Harsh penalties applied against companies and individuals for forest crimes serve as deterrents, including revoking the license of recidivists. Rigorous auditing can induce fiscal transparency and compliance. Key regulatory functions can be outsourced to independent operators. In Papua New Guinea, the use of Swiss firm SGS (Société Générale de Surveillance) since 1994 to monitor logs loaded onto ships has virtually ended misreporting of volume, species, and grade. Setting a log export price by species, and export tax as a percentage of that, would also stop underreporting of value (ODI 2007, 35). Governments can help set up

cooperatives for milling, transport, marketing, and certification.

There are many ways forward, but political will is often weak. As many politicians, officials, and companies are involved in corruption, they can obstruct reforms. Transparency International proposes civil society options to deal with this situation. The media can publicize forest crimes and corruption, highlighting their costs to the nation. Taking offenders to court, raising issues with the ombudsman, and publishing the outcomes can make life difficult for forest criminals even if a conviction is not secured. Public debate on reforms, particularly in election campaigns, can be effective. Statistics to track corruption and identify prime risk areas in the forest sector are useful. Ethics codes can encourage best practices among foresters, officials, and companies (Rosenbaum 2005). In Papua New Guinea, Solomon Islands, and Papua, an independent enquiry into forest corruption is a priority, along with a moratorium on logging licenses until the system is cleaned up (ACF and CELCOR 2006, 6).

Civil society can push for reform of forestry, but peer pressure and guidance from the Pacific Islands Forum would be invaluable. Continuing grave regional trends and the absence of national leadership dictates that the Forum take collective leadership. SPC-commissioned reports demonstrate unambiguously that the logging industry is not adhering to Codes of Logging Practice in Melanesia (Enters 2007), and that downstream processing is inadequate (Bulai 2007b). These and other studies reveal that logging in Solomon Islands, Papua New Guinea, and Papua is unsustainable and

riddled with illegality, while (although not in the same league) logging in Fiji and Vanuatu also has room for improvement.

There is considerable scope for action by the Forum. The languishing regional code of conduct on logging could be resurrected. Rather than leaving the forestry agenda solely to the SPC, the Forum could lend political clout to policy innovations by Pacific Island countries, including adoption of ITTO and UNFF initiatives. Solomon Islands also needs encouragement to join the International Tropical Timber Organization. Specific targets for forestry could be incorporated into the Pacific Plan, just as they are for other significant regional issues. The Forum could boost the profile, mandate, and budget of the Forest and Trees Programme at the SPC so it can effectively address deforestation.

The Melanesian Spearhead Group (MSG) is a logical organization for mounting a campaign on forests, as its membership coincides with the forested countries. The MSG has not had forests on the agenda of its latest meetings in 2003 and 2006. Ideally, MSG heads of government would mount joint forest initiatives, including a campaign against illegal logging, and collective bargaining for assistance from donors and global agencies. The next MSG meeting is due in April 2008 in Vanuatu. It is hoped that this opportunity to act on forests is not lost. Yet, realistically, it is unlikely that all four leaders will simultaneously agree on national reform, much less instigate subregional approaches in this domain.

Melanesian leaders may also balk at forestry being proactively addressed

by the Pacific Islands Forum and may lodge indignant protests about interference with their sovereignty. Conversely, Australia and New Zealand will be keen to push for sustainable forestry in keeping with their domestic policies, past projects in Melanesia, and concerns about impending crises in neighboring countries. For atoll nations, the threat of sea-level rise alone should excite interest in measures to halt deforestation. Climate change is thus an issue the Forum could rally around, to lobby for sustainable forestry in neighbors and to seek concomitant support from donors and global agencies for avoiding deforestation.

The Forum can request dialogue partners to instigate reforms. Indonesia must take further action in Papua, at the very least to prevent illegal operators from crossing into Papua New Guinea. Malaysia could begin to exercise oversight of its logging companies to combat illegal practices. Timber shipments of dubious origin must be investigated and ideally halted by China and the markets it sells to, such as the European Union, United States, and Japan. If the Forum really wants to bite the bullet, it could propose that members and partners jointly establish certification systems to end the illegal trade. Initially these requests could elicit no action whatsoever, but the Forum would have made its concerns known, and this is a significant step in its own right.

Some donors are making an effort. Once the nemesis of environmentalists, the World Bank devised a new forests policy in 2003 emphasizing sustainable development and environmental benefits. It operates in tropical forestry but only if it can minimize adverse

effects and encourage reforestation (Christy and others 2007, 22–24). This policy led the bank to cease funding a major forestry and conservation project in Papua New Guinea in 2005 because the government did not respond to critical reviews of the sector (Forest Trends 2006, 8). This was not an ideal outcome, but it impressed on Port Moresby that they must improve operations. For over a decade the World Bank has had a Global Forest Alliance with the WWF to achieve quantifiable global targets (ie, millions of hectares) in new protected areas of forest, as well as sustainable certification for timber. This alliance and the bank's carbon partnership are the kinds of programs that Pacific Island countries should tap into.

Australia has supported Pacific forests as the biggest country donor to the Land and Resources Division in the Secretariat of the Pacific Community (the European Union is the biggest donor overall), via costly research into regional forestry by the Australian Centre for International Agricultural Research, and through bilateral forestry reform programs in Melanesia. Australia escalated efforts in 2007 with a policy to eliminate trade in illegally sourced forest products. The means to this end are sustainable forestry, improved law enforcement and governance, and credible certification (DAFF 2007, 12). This policy is pursued bilaterally, regionally in the Asia Pacific, and in global forums. Australia also announced an A\$200 million "Global Initiative on Forest and Climate" in March 2007. Its geographic focus is on Indonesia, Philippines, Cambodia, Laos, Papua New Guinea, and Solomon Islands (AusAID 2007, 27).

Australian policy is on the right path and could provide a template for other donors and the Forum. However, there was skepticism about the Liberal National Party Coalition's launching a spate of policies in an election year. The view was widespread that, after a decade, Australia had acted too little and too late on climate change. Certainly funds for the Global Initiative will quickly dissipate between Southeast Asia and the Pacific. In election policies, Labor leader [now Prime Minister] Kevin Rudd prioritized development in the Pacific but was short on detail. It remains to be seen whether the new Labor government will increase the momentum of the forests campaign by dedicating more resources and demonstrating leadership in the Pacific Islands Forum.

The European Union sees itself as a potential savior for Pacific forests. The central theme for EU cooperation with the Pacific is "blue-green," indicative of their special interest in fisheries and forests. Indeed, the new EU Pacific Strategy cites "natural resources and environmental challenges of global significance" as its first reason for deeper engagement with the Pacific. It highlights fisheries, biodiversity, and forests as global public goods and identifies excessive logging as a "significant risk to the global community" (EU Commission 2006, 3). The attention to forests is not surprising given the weight the European Union accords to climate change. The European Union has declared its "readiness to support Pacific countries" in "the fight against . . . illegal logging and deforestation" (EU Council 2006).

The European Union has worked in Papua New Guinea on sustainable

forestry. However, its favored mode of operation is regionalism and achieving goals via regional integration. It has a "Forest Law Enforcement, Governance and Trade" Action Plan for the African, Caribbean, and Pacific countries and proposes a regional approach to this in the Pacific. The European Union is also keen to promote certification of forest products (EU Commission 2006, 9–10). The European Union is now better positioned to push its agenda, since holding its inaugural Special Dialogue with the Pacific Islands Forum in October 2007. This annual dialogue will be supported by additional meetings at the ministerial and officials level (EU–PIF 2007). The European Union sought this level of dialogue because it felt that the one-day Forum dialogue session for all partners was inadequate. Nor had East Asian summitry (von Strokirch 2007) gone unnoticed by the European Union, or the United States, which also hosted its first summit with Pacific Island countries in 2007.

The European Union has the wherewithal to make a difference in the Pacific. Under the 10th European Development Fund (EDF), thirteen Forum island states (Fiji is excluded) will receive a combined total of 267 million euros for 2008–2013, three times that of the previous period (Agonist 2007). Although there is an interim arrangement for limited disbursement of the 10th EDF, total allocation of funds will depend on concluding an Economic Partnership Agreement in 2008. The agreement was to be finalized in late 2007 but disputes between the two sides prevented this. Not all the EDF money is for forests, but a good deal is likely to be in line with the EU Pacific Strategy

and the EDF's focus on sustainable management of resources.

In the 1990s donors in the Pacific were active in helping set up forestry institutions, policy, and legislation featuring national Codes of Logging Practice. Much of the resulting policies and laws are quite sound. However, donor interest and funds dried up before real progress was made with implementation (Enters 2007). In particular, education, training, monitoring, and enforcement all need attention by way of resources and expertise from donors. These are vital tasks in sustainable forestry and require ongoing support in addition to the big-picture visions being debated by actors in this sector.

The World Bank, Australia, the European Union, and nongovernment organizations like the WWF, Greenpeace, and Forest Trends are singing the same tune in advocating a worldwide system to certify sustainable and legal production of timber, especially from tropical forests. This approach has merit but could backfire. If tropical producers are subjected to a boycott, it could result in a dramatic drop in revenue for countries that can least afford it. A boycott would also give a huge advantage to developed-country timber sectors because they are better equipped to certify their product. These consequences could be largely avoided if developing countries were not expected to bear the costs of setting up certification schemes and enforcing them.

Similarly, the cost of establishing protected areas of forest cannot be borne by developing countries, as they do not have the resources to lock up large areas permanently or to

police them. They must be adequately compensated for the costs of avoiding deforestation. To ensure lasting benefits for the nation and ongoing public support, and to prevent renegeing on promises to avoid deforestation, the benefits must be returned to the community by investing compensation funds in sustainable enterprises, including non-wood forestry products, and in essential services.

To be appealing, compensation must equal foregone income, not just from logging but also from converting forested land to agriculture, notably palm oil plantations. Otherwise palm oil profits could induce clear felling in spite of, or even because of, tropical timber boycotts. One of the European Union's biggest imports from the Pacific is palm oil. The European Union and other states thus need to reconsider consumption and sourcing of this product. For environmental goals of tropical timber certification to be met, the production of palm oil may require sustainable certification or face boycotts.

These innovative approaches are complex, costly, and contentious. It should not fall to developing nations, donors, or even regional organizations to design, implement, and fund them. To be optimal, initiatives for global forests to sequester carbon and preserve biodiversity should gain the imprimatur of the international community, then be advanced by global agencies. Moreover, just as the Western and Central Pacific Fisheries Organization cannot work without distant fishing nations, regional forest strategies are doomed without the cooperation of the equally distant logging and consumer nations. This is not

to say that the Pacific Islands Forum, and even individual microstates, cannot play an advocacy role, just as they have done with climate change and fisheries.

The sheer complexity of cross-cutting issues and actors in global forestry has confounded efforts to manage it. Nevertheless, producer nations, multinational companies, consumer nations, and intergovernmental institutions all share responsibility. With few exceptions, there has been a political failure to appreciate the seriousness of deforestation, much less to engage in concerted action to reverse it. While global forums have identified principles, and even policies, to guide the way forward, much of this still remains in the realm of rhetoric. Binding obligations must apply to stakeholders at all levels and substantial funding must be provided for developing countries to implement sustainable forestry.

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